Partnerships For Innovation: Accelerating Innovation Research- Research Alliance

PFI:AIR-RA

(Solicitation NSF 14-612)

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Welcome and Introduction

- Structure of webinar (1-2pm EST)
  - PFI:AIR-RA briefing (20-30 min)
  - followed by Q&A
  - Operator assisted
- Website for this webinar and more information about the PFI:AIR-RA program:

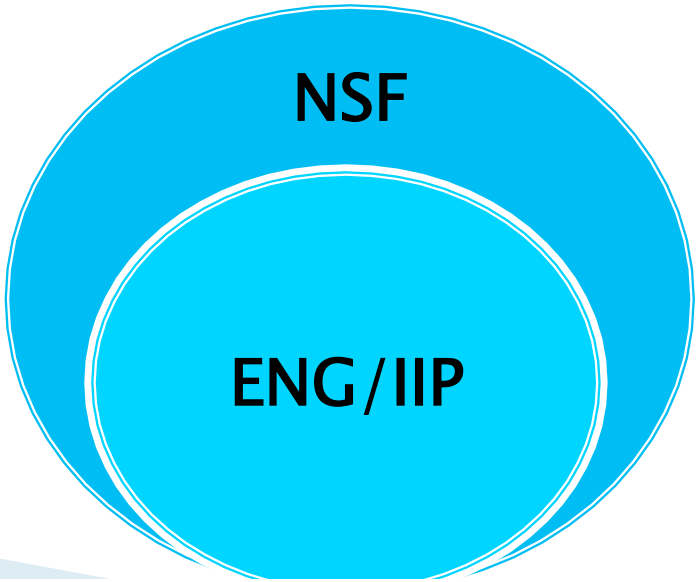
  http://www.nsf.gov/eng/iip/pfi/air-ra.jsp
- Questions? bkenny@nsf.gov

Big Picture: NSF Goals

Strategic Goals	Transform the Frontiers of Science and Engineering	Stimulate Innovation and Address Societal Needs	Excel as a Federal Science Agency
Objectives	• Invest in fundamental research to ensure significant continuing advances across science, engineering, and education. • Integrate education and research to support development of a diverse STEM workforce with cutting-edge capabilities. • Provide world-class research infrastructure to enable major scientific advances.	**• Strengthen the links between fundamental research and societal needs through investments and partnerships.** • Build the capacity of the Nation to address societal challenges using a suite of formal, informal, and broadly available STEM educational mechanisms.	• Build an increasingly diverse, engaged, and high-performing workforce by fostering excellence in recruitment, training, leadership, and management of human capital. • Use effective methods and innovative solutions to achieve excellence in accomplishing the agency's mission.

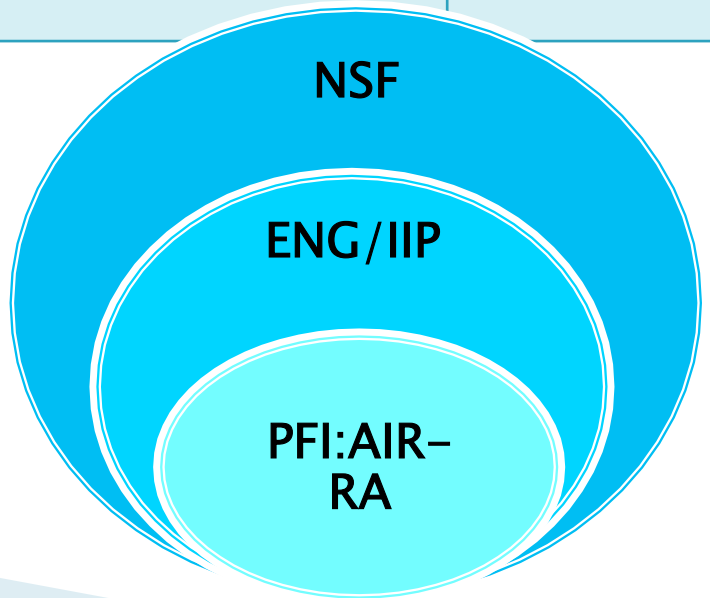
Engineering Directorate: Division of Industrial Innovation and Partnerships

Strategic Goal	**Driving the expansion of our nation's innovation capacity**		
Objectives	•**Research**: Support innovation research that builds on fundamental research discoveries that exhibit potential for societal and economic impact.	•**Partnerships:** Encourage research partnerships between academia and industry.	•**People**: Offer hands-on experience in the innovation process to current and future entrepreneurs and innovators.



PFI: Accelerating Innovation Research–Research Alliance

Strategic Goal	**Accelerate the derivation of societal and economic benefit from new knowledge created in the discovery process.**		
Objectives	•**Research:** Leverage NSF research award investments to accelerate the translation of research discoveries toward commercial realities.	•**Partnerships:** Promote the development or extension of an academic-based innovation ecosystem around an NSF-funded research consortium	•**People**: Enhance knowledge and practice of innovation in faculty and students.

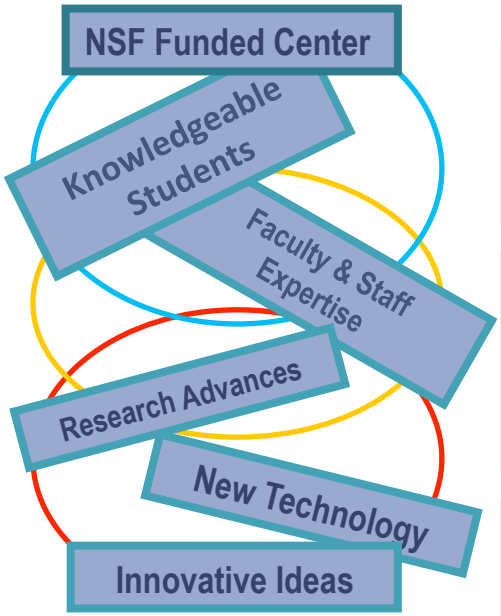


AIR- Research Alliance: Leveraging Center-level NSF Investments

Develop/enhance an academic-based innovation ecosystem to accelerate technology transfer

Research Consortium + Partner/Collaboration Entities = Expected Accomplishments

Partnership



- Does the partnership enable innovation that neither party could do as well or rapidly alone?
- Does the partnership leverage research and technology of the research consortium to accelerate innovation?
- Does the partnership impact the development of an innovation ecosystem?

Research partner(s): e.g. University, Small Businesses, Others

+

3rd Party Investor(s): Up to $800K from NSF, contingent on 1:1 match

- Accelerates transfer of research results into existing businesses or start-ups
- Develops network of connections
- Develops/enhances an academic-based innovation ecosystem
- Students prepared to be entrepreneurially competitive
- Measures success

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504973

Key Facts 14-612 (1)

- One window

LOI required	Full Proposal
January 12, 2015	February 18, 2015

- PI must be faculty member active within an NSF-funded Research Consortium
- Technology to be translated must leverage the research of the underlying consortium
- At least one 3rd party investor is required
  - 1:1 match, up to 25% can be in-kind
- At least one research partner is required
- Maximum award is up to $800K, 3 years

Key Facts 14-612 (2)

- Evidence of committed 3rd party investment is required at time of proposal submission
- At least 30% of 3rd party cash investment must be in place prior to award
  - Remaining 70% must be in place prior to start of Year 3
- 70% of NSF funding available at time of award
  - Remaining 30% contingent on successful mid-term review
- Mid-term review at NSF at 18 months
  - PI, Research Partner, 3rd Party Investor
  - Review of progress against proposed plans and milestones; evidence of developing innovation ecosystem

Definitions

- NSF-funded Research Consortium
  - An existing research partnership between/amongst universities and other entities funded by the NSF
  - Conducts research on problems typically beyond the reach of a single investigator
  - Has research results and/or technology ready for translation
  - Has a network of connections that can be leveraged to develop and sustain the PFI:AIR-RA innovation ecosystem
  - Examples: NSF Research Centers e.g. I/UCRCs, ERCs, STCs, etc.
- Research Partner
  - Adds complementary skill set to the underlying Research Consortium
- 3rd Party Investor
  - An entity with sufficient interest in the Research Consortium technology to provide a cash or in-kind investment
  - Examples: companies, venture capitalists, federal (non-SBIR), state or local government, etc.

Funding

- Maximum award size: $800,000
  - Requires 1:1 3rd Party Match,
    - Minimum 75% cash, up to 25% “in-kind.”
- Examples:

3rd Party Cash Investment	3rd Party In-Kind Investment	Maximum NSF Funds
$300,000	$50,000	$350,000
$300,000	$100,000	$400,000
$300,000	$200,000	$400,000
$750,000	$50,000	$800,000
$1,000,000	$0	$800,000

Project Narrative (1)

- Description of the technology(ies) to be translated and/or transferred.
  - Discuss the targeted market space and the potential for competitive advantage, e.g. the perceived value proposition.
- NSF Lineage
  - Describe how the project work derives from the core mission of the underlying research consortium (include the NSF award number).
- Research Plan
  - Include milestones with specific objectives, tasks and expected outputs (e.g. early stage prototype, fully functioning prototype)
  - Identify the technology/knowledge gaps to be addressed.
- Role of Research Partner
  - Describe how the research partnership(s) enables competitive innovation that neither party could do as well or rapidly alone.
  - Describe the role of the research partner(s) in executing the research plan.

See Solicitation for full details

Project Narrative (2)

- Role of the 3rd Party Investor(s)
  - Discuss how the collaboration with 3rd party investor(s) will enable the accelerated transfer of innovative technologies from academia to commercial realities.
- Development/Enhancement of Innovation Ecosystem
  - Describe how the the proposed research partnership(s) and 3rd party collaboration(s) will contribute to a sustainable academic-based innovation ecosystem.
- Assessment Plan
  - Describe metrics and approach to gauge success of partnerships and collaborations.
- Education Plan
  - Describe how participating students will learn about innovation and entrepreneurship.

Supplemental Documents

- Letter(s) of Commitment from 3rd Party Investor(s)
  - Specify the total investment, timing and nature of the commitment (e.g. cash or in-kind)
- Table of 3rd Party Investments
  - A table summarizing the committed 3rd party investments including amount, timing and nature of the commitment (e.g cash or in-kind)
- Letter(s) of Commitment from Research Partner(s)
  - Specify the anticipated role of the Research Partner.
- Allocation of Funding Table
  - For NSF funding only, show how funding is allocated across proposed tasks
- Letter of Cooperative Research Agreement
- Data Management Plan
- Postdoctoral Research Mentoring plan (if applicable)
- Letters regarding use of human or animal subjects (if applicable)

If Research Consortium is Post-NSF Support (within 3 years)…

- Supplemental Documents must include evidence that Consortium is still in good standing
  - Table with list of grants received by Research Consortium
    - Include PI/co-PI, funding type, source, and amount, grant duration and date of award
  - Number and type of students (e.g. MS or PhD) funded by the Research Consortium and graduated post-NSF support
  - Statement by Consortium Director describing type of ongoing partnerships and research/education/commercial activities that comprise the Consortium
    - Must be co-signed by a reporting Research Administrator

Additional Review Criteria

- Quality and effectiveness of proposed plans
  - Research plans, proposed tasks and milestones, commercialization plans, partnership and collaboration plans
- Quality and appropriateness of research partnership(s)
- Commitment of 3rd party investors
- Effectiveness of proposed partnerships, 3rd party investors and strategic plans in catalyzing or enhancing sustainable innovation ecosystem
  - Effectiveness of proposed metrics and assessment plan
- Net added value to students
- If post-NSF support, strength of evidence the Research Consortium is still functioning as a research partnership

Thank you for your interest in the PFI:AIR-Research Alliance program, NSF 14-612. A copy of the webinar will be available at http://www.nsf.gov/eng/iip/pfi/air-ra.jsp

Additional questions, please contact Barbara Kenny at bkenny@nsf.gov

Questions?